CLAIMS

1. A modular ink jet delivery system, comprising:

a print manifold including a passageway therethrough for the transfer of ink;

a pen tower removably and operatively engageable with the manifold, the pen tower including a central passageway for receiving and transferring ink from the manifold;

a retainer member, operatively connected to the manifold;

a first sealing member operatively connected to the pen tower, the first sealing member forming a first seal with the retainer member; and

a second sealing member operatively connected to the retainer member, the second sealing member forming a second seal with the pen tower,

wherein when the pen tower and the manifold are operatively engaged with each other, a substantially redundantly sealed passageway is formed for the transfer of ink from the manifold to the pen tower.

2. The modular ink jet delivery system of claim 1, wherein the retainer member is fixedly attached to the manifold.

3. The modular ink jet delivery system of claim 2, wherein the second sealing member comprises an elastomer, and wherein the second sealing member engages an inner surface of the pen tower defined by the passageway to form a radial seal therebetween.

4. The modular ink jet delivery system of claim 2, wherein the second sealing member comprises a spring-backed valve member coupled to an elastomer housing, wherein when the pen tower and the manifold are operatively engaged with each other, the pen tower contacts the elastomer housing to form the second seal therebetween.

5. The modular ink jet delivery system of claim 2, wherein the second sealing member comprises a check valve coupled to an elastomer needle, and wherein when the pen tower and the manifold are operatively engaged with each other, the pen tower contacts the elastomer needle to form the second seal therebetween and the check valve is opened to permit ink flow therethrough.

6. A modular ink jet delivery system, comprising:

a manifold including a passageway therethrough for the passage of ink;

a pen tower removably and operatively engageable with the manifold, the pen tower including a passageway for receiving and transferring ink from the manifold;

a retainer member fixedly connected to the manifold;

first sealing means forming a first seal with the pen tower when the pen tower is operatively engaged with the manifold; and

second sealing means forming a second seal with the retainer member when the pen tower is operatively engaged with the manifold.

7. The modular ink jet delivery system of claim 6, wherein the first sealing means are operatively connected to the retainer member.

8. The modular ink jet delivery system of claim 7, wherein the second sealing means are operatively connected to the pen tower.

9. The modular ink jet delivery system of claim 6, wherein the first seal comprises a face seal between the first sealing means and the pen tower.

10. The modular ink jet delivery system of claim 9, wherein the second seal comprises a face seal between the second sealing means and the retainer member.

11. The modular ink jet delivery system of claim 6, wherein the first seal comprises a radial seal between the first sealing means and the pen tower.

12. The modular ink jet delivery system of claim 6, wherein the first sealing means forms a third seal with the manifold.

13. The modular ink jet delivery system of claim 12, wherein the second sealing means forms a fourth seal with the pen tower.

14. The modular ink jet ink delivery system of claim 6, wherein when the pen tower and the manifold are operatively engaged with each other, a substantially redundantly sealed passageway is formed for the transfer of ink from the manifold to the pen tower.

15. An ink delivery system, comprising:

an ink reservoir;

a manifold assembly including a passageway for receiving and transferring ink from the ink reservoir;

a pen tower removably and operatively engageable with the manifold assembly, the pen tower including a passageway for receiving and transferring ink from the manifold assembly;

a first sealing member operatively connected to the manifold assembly, the first sealing member forming a first seal with the pen tower when the pen tower is operatively engaged to the manifold assembly; and

a second sealing member operatively connected to the pen tower, the second sealing member forming a second seal with the manifold assembly when the pen tower is operatively engaged to the manifold assembly.

16. The ink delivery system of claim 15, wherein the manifold assembly comprises:

a print manifold operatively connected to the ink reservoir; and

a retainer member fixedly attached to the print manifold.

17. The ink delivery system of claim 15, wherein the second seal comprises a face seal.

18. The ink delivery system of claim 17, wherein the first seal comprises a face seal.

19. The ink delivery system of claim 17, wherein the first seal comprises a radial seal.

20. The ink delivery system of claim 15, wherein the first sealing member forms the first seal along the passageway of the pen tower.

21. The ink delivery system of claim 15, wherein the first sealing member comprises an elastomer.

22. The ink delivery system of claim 15, wherein the first sealing member comprises a foam material.

23. The ink delivery system of claim 15, wherein the first sealing member includes a valve assembly coupled to an elastomer member.

24. The ink delivery system of claim 15, wherein the pen tower is operatively connected to a print head cartridge.

25. A modular ink jet ink delivery system, comprising:

a print manifold including a passageway therethrough for the transfer of ink;

a pen tower removably and operatively engageable with the manifold, the pen tower including a central passageway for receiving and transferring ink from the manifold;

a retainer member, operatively connected to the manifold;

a first sealing member operatively connected to the pen tower, the first sealing member forming a first seal with the retainer member; and

a second sealing member operatively connected to the retainer member, the second sealing member forming a second seal with the pen tower,

wherein when the pen tower and the manifold are operatively engaged with each other, a substantially redundantly sealed passageway is formed for the transfer of ink from the manifold to the pen tower.